REMARKS/ARGUMENTS

Claims 1-15 are pending. In an Office Action dated June 4, 2004, the Examiner (a) rejected claims 5, 7, and 9 under 35 U.S.C. § 112 as allegedly indefinite; (b) rejected claims 1-3 and 11-15 under 35 U.S.C. § 103(a) as allegedly unpatentable over Barton (U.S. Patent No. 5,646,997) in view of Honsinger (U.S. Patent No. 6,278,791); (c) rejected claims 4-6 under 35 U.S.C. § 103(a) as allegedly unpatentable over Barton in view of Honsinger and further in view of Hagersten (U.S. Patent No. 5,862,357); and (d) rejected claims 7-10 under 35 U.S.C. § 103(a) as allegedly unpatentable over Hagersten in view of Barton. Applicants respectfully traverse for the reasons set forth below.

Rejection of Claims 5, 7, and 9 Under 35 U.S.C. § 112, Second Paragraph

Claims 5, 7 and 9 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as their invention.

Although Applicants respectfully disagree with the instant rejection, by this Amendment Applicants have amended claims 5, 7, and 9 in the manner suggested by the Examiner, and therefore respectfully submit that this rejection has been overcome.

Rejection of Claims 1-3 and 11-15 under 35 U.S.C. § 103(a)

Claims 1-3 and 11-15 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Barton, in view of Honsinger.

Claim 1 recites a method for protecting the secrecy and integrity of data stored on a non-volatile storage medium, and includes generating meta-data relating to a block of data, hashing the block of data, hashing the meta-data, and encrypting the block of data and the meta-data to form one or more uniform blocks of encrypted data.

As an initial matter, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of unpatentability with respect to claim 1, in that the Examiner has not indicated how each of the claim elements is allegedly taught by the cited references. For example, the Examiner does not explain how either Barton or Honsinger teaches "storing a cryptographic key in a substantially secret storage medium, the key being operable to decrypt the one or more uniform blocks of encrypted data," as recited in claim 1.

In addition, Applicants respectfully submit that Barton does not teach or disclose, *inter alia*, encrypting a block of data and encrypting related meta-data to form one or more uniform blocks of encrypted data. At most, the cited portions of Barton show encryption of the meta-data, but they do not show the additional encryption of the data block itself to form a uniform block of encrypted data. Indeed, as presently understood, there is no indication in Barton that the data block into which the meta-data is embedded is ever encrypted. *See, e.g.,* Barton at FIG. 1, and col. 7, lines 14-45 (describing encryption of a bit stream that is to be embedded in a data block, but not describing encryption of the data block itself). Further, Honsinger fails to cure this deficiency. For at least these reasons, Applicants respectfully submit that claim 1 is patentable over the combination of Barton and Honsinger.

Moreover, Applicants respectfully disagree with the characterization of Honsinger made by the Office. The Office Action states that "Honsinger teaches the use of the hash values of the meta-data." Applicants respectfully disagree. As understood, Honsinger does not show the calculation of a hash of the meta-data; instead, Honsinger teaches the use of meta-data that *contains* a hash of a *separate content object* (i.e., an image). Honsinger does not teach the computation of a hash of *the meta-data itself*. Thus, for at least this additional reason, Applicants respectfully submit that claim 1 is patentable over the combination of Barton and Honsinger.

Claims 2-3 are dependent on claim 1, and are thus allowable for at least the reasons set forth above in connection with claim 1.

With respect to independent claims 11, 12, and 14, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of unpatentability. Claims 11, 12, and 14 are independent claims that differ substantially from independent claim 1, yet the Examiner has not indicated where the cited references teach the elements that are unique to these claims. Indeed, the Examiner does not even address claim 12, and for claims 11 and 14, indicates only that the "indexing information" recited in these claims "is met by the meta-data, which indexes the file (i.e., data block)." The Examiner does not even identify the reference to which he is referring. In any event, Applicants respectfully submit that, as understood, neither the metadata of Barton nor Honsinger comprises indexing information as recited in claims 11, 12, and 14.

Claims 13 and 15 are dependent on claims 12 and 14, respectively, and are thus allowable for at least the reasons set forth above in connection with claims 12 and 14.

Rejection of Claims 4-6 under 35 U.S.C. § 103(a)

Claims 4-6 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Barton in view of Honsinger and further in view of Hagersten.

Claims 4-6 are dependent from claim 1. With respect to the patentability of claim 1, Applicants submit that Hagersten fails to cure the deficiencies noted with respect Barton and Honsinger; thus claims 4-6 are allowable for at least the reasons set forth above in connection with claim 1.

Rejection of Claims 7-10 under 35 U.S.C. § 103(a)

Claims 7-10 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Hagersten in view of Barton.

Claim 7 recites a method of managing the storage of a plurality of data blocks on a storage medium, and includes generating a hierarchical location map for locating individual ones of said plurality of blocks, the map including a plurality of nodes of at least two different types: a first type of node including a hash of a data block or the data contained in a subordinate node, and one or more location indicators; and a second type of node including a hash of the data contained in a subordinate node, a location indicator of the subordinate node, and a key for decrypting one or more subordinate nodes.

First, Applicants respectfully submit that the Examiner has failed to establish a prima facie case of unpatentability with respect to claim 7, in that the Examiner has not indicated how each of the claim elements is allegedly taught by the cited references. For example, the Examiner does not explain how either Hagersten or Barton teaches a

hierarchical location map including at least two types of nodes, as recited in claim 7. In particular, the Examiner does explain how the cited references teach either of the specific node types recited in claim 7, and Applicants respectfully submit that neither reference contains any such teaching.

Moreover, Applicants respectfully disagree with the characterizations made concerning Hagersten. In particular, Applicants respectfully submit that Hagersten does not teach or suggest a *hierarchical* map for *locating* individual data blocks, the map including, *inter alia*, one or more location indicators specifying the locations at which subordinate nodes or *data blocks* are stored. Instead, as presently understood, the memory locations map described in Hagersten is simply used to allocate memory amongst various processors in a multiprocessor system, and to resolve the various aliases that may be used by different processes to refer to the same memory location. Hagersten does not teach a hierarchical location map that describes where particular blocks of data are stored; indeed, the memory locations referred to in Hagersten could contain arbitrary data, since Hagersten is simply concerned with coordinating access to memory amongst various processes, not with tracking the hierarchical relationships between particular blocks of data residing at those memory locations. Moreover, Barton fails to cure this deficiency. For at least these additional reasons, Applicants respectfully submit that claim 7 is patentable over the combination of Hagersten and Barton.

Claims 8-10 are dependent on claim 7, and are thus allowable for at least the reasons set forth above in connection with claim 7. Moreover, Applicants respectfully

submit that the Examiner has failed to establish a prima facie case of unpatentability with respect to dependent claims 8-10, in that the Examiner has not indicated how each of the claim elements is allegedly taught by the cited references. Indeed, the Examiner does not even address claim 8, or the specific node types described in claim 10. For at least these additional reasons, Applicants respectfully submit that claims 8-10 are patentable over the combination of Hagersten and Barton.

Conclusion

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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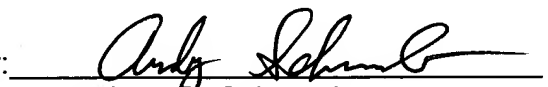
By: 
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